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10/530,818	04/08/2005	Manfred T. Reetz	100716-61 (KGB)	4327

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EXAMINER

MCDONOUGH, JAMES E

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

09/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,818

**Applicant(s)**

REETZ ET AL.

**Examiner**

JAMES E. MCDONOUGH

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2, 7, 8 and 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 4/8/2005 and 7/5/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's election with traverse of Group I, claims 1-11 in the reply filed on 5/16/2008 is acknowledged. The traversal is on the ground(s) that diastereomers are not structurally different for the purposes of the invention. This is not found persuasive because while it is understood that using two different enantiomers, would not fit the definition in the specification, as the compound would not be chiral (i.e. meso compound), there is absolutely no mention in the specification of any teachings of diastereomers, which would be considered to be structurally different, especially in view of the knowledge available to the skilled artisan concerned with asymmetric synthesis.

The requirement is still deemed proper and is therefore made FINAL.

Applicants argue against the election of species, in the reply filed 5/16/2008, this argument is not persuasive as applicants have submitted no evidence or reasoning now of record to indicate that the different groups/compounds are obvious variants.

Accordingly claims 2, 7, 8 and 12-15, have been withdrawn as not directed towards the elected invention. With regards to claims 2, 7, and 8 the specifically elected species would not read on these claims.

### **Rejections**

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the last line of the claim W is selected from the groups  $(\text{CH}_3)_3$  is not a group, it appear applicants are trying to claim tert-butyl, which is  $\text{c}-(\text{CH}_3)_3$ . Correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Reetz et al.; Angew. Chem. Int. Ed. **2000**, 39, (21), 3889-3890.

Regarding claim 1

Reetz teaches the use of two different bonded to a transition metal (second page, first full paragraph).

Regarding claim 3

Reetz teaches that the two mono-phosphorous ligands are chiral (see 8a and 8b).

Regarding claims 4-6

See 8a and 8b

Regarding claims 9 and 10

Reetz teaches the use of Rhodium as the metal atom (see table 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reetz et al.; Angew. Chem. Int. Ed. **2000**, 39, (21), 3889-3890 as applied to claims 1, 3-6, 9 and 10 above.

Reetz teaches the use of some of the ligands in claim 11 (see 7a-f), Reetz also teaches the use of two structurally different ligands (second page, first full paragraph), although, Reetz does not teach using two different ligands that read on the two different ligands instantly claimed at the same time, it is the position of the examiner that this would be obvious to one of ordinary skill in the art in an effort to optimize the activity and

selectivity of the catalyst, through routine experimentation in the art taking into account the fact that "Lewis basicity" of the phosphorous can be controlled by changing the electronegativity of the atoms bonded to phosphorous (i.e. as we go from alkyl to amide to alkoxide the basicity of the phosphorous atom will decrease as the electron density on the phosphorous atom is diminished, which will in turn reduce the electron density of the metal center, which is known to affect the reactions of the metal center with substrates, it is also known that the use of an alkyl on the ligating atom will exhibit a greater steric effect, which often times help the selectivity of the catalyst, until the catalyst is too crowded for binding of the substrate, this can be seen by comparing 7a-c, where the steric burden would increase going from methyl to phenyl to isopropyl.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-6, and 9-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 6, 7 and 10 of U.S. Patent No. 7,265,237. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the reference fail to teach the use of two different ligands.

Claims 1, 3-6 and 9-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 6, 7 and 10 of U.S. Patent No. 7,265,237 in view of Reetz et al.; Angew. Chem. Int. Ed. **2000**, 39, (21), 3889-3890. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '237 fail to teach the use of two different ligands, however, as shown in Reetz et al the use of two different ligands is conventional and can lead to 100 % conversion with 98.8 % enantiomeric excess.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. MCDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/  
Primary Examiner, Art Unit 1793

JEM 8/227/2008